the theory still further, Dulong attempted, by reversing the process of Laplace, to deduce the coefficient by which the Newtonian formula is to be multiplied, directly from experiments themselves. The object of the present paper is to compare the investigation of Dulong with the experiments on the velocity of sound made by Drs. Moll and Van Beek, of which an account was lately published in the Philosophical Transactions. By applying the values of the coefficients thus obtained, the computed velocities of sound came out much nearer to the observed velocities; and the author concludes by remarking, that such differences as yet remain between calculation and experiment, may with great probability be ascribed to the errors, which are unavoidable in observations of so complicated a nature.

On the Elasticity of Threads of Glass, with some of the most useful Applications of this property to Torsion Balances. By William Ritchie, *A.M. F.R.S., Rector of the Royal Academy of Tain.* Read March 18, 1830. [*Phil. Trans.* 1830, *p.* 215.]

The author proposes the employment of threads of glass in the construction of torsion-balances, in place of the silver wire, used by Coulomb for the measurement of minute electric or magnetic forces. He describes a galvanometer of his invention, acting upon this principle, the intensity of the galvanic current being measured by the torsion of a slender filament of glass, to the lower end of which a magnetized needle is fixed at right angles. He also applies the same power to the improvement of the sensibility of the common balance for weighing minute bodies, by affixing to the beam a long glass thread horizontally in the axis of suspension, by the torsion of which, when the balance has been brought nearly to a level, the more accurate adjustments are to be effected. On the whole he considers that glass, from its perfect elasticity, possesses decided advantages over metallic wires, for the construction of instruments acting on the principle of torsion.

Memoir on the occurrence of Iodine and Bromine in certain Mineral Waters of South Britain. By Charles Daubeny, *M.D. F.R.S. Professor of Chemistry in the University of Oxford.* Read May 6, 1830. [*Phil. Trans.* 1830, *p.* 223.]

The author lays claim to being the first who announced to the public the existence of bromine in the mineral springs of England; a discovery similar to that which had been previously made by others in many analogous situations on the Continent. His reason for offering the present communication to the Royal Society is, that he has examined on the spot a great number of mineral springs, and endeavoured to obtain, wherever it was practicable, an approximation to the proportion which iodine and bromine bear to the other ingredients. He has also aimed at forming an estimate of their comparative frequency and abundance in the several rock formations, an ob-